

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently amended) A method for establishing a network connection between a client system and a network, the method comprising:

(a) collecting real time connectivity information by the client system, wherein the collecting step (a) further includes:

(a1) monitoring and collecting network traffic in real time;

(a2) assigning a weight to the real time network traffic based on popularity; and

(a3) creating a weighted list from the weighted real time network traffic; and

(b) utilizing the real time connectivity information by the client system to establish a connection with the network.

2. (Original) The method of claim 1 further comprising:

(c) utilizing data from a local persistent knowledgebase to establish a connection to the network.

3. (Original) The method of claim 1 further comprising:

(c) utilizing data from a server based database to establish a connection to the network.

4. (Canceled)

5. (Currently amended) The method of claim 4 1 further comprising:

(c) storing the weighted list in the client system.

6. (Original) The method of claim 5, wherein the local persistent knowledgebase is stored in the client system.

7. (Original) The method of claim 1 further comprising:

(c) utilizing a set of local rules to establish a connection to the network.

8. (Original) The method of claim 1, wherein the utilizing step (b) includes:

(b1) detecting a failed connection;

(b2) determining a cause of the failed connection by the client system;

(b3) generating a solution based on the cause and the real time connectivity

information; and

(b4) implementing the solution.

9. (Original) The method of claim 8, wherein the determining step (b2) includes:

(b2i) analyzing at least one error message associated with the failed connection; and

(b2ii) auditing a plurality of communication devices in the client to determine which of

the plurality of communication devices is a potential candidate for connectivity.

10. (Original) The method of claim 8, wherein the generating step (b3) includes:

- (b3i) analyzing the real time connectivity information to determine a range of IP addresses assigned by a DHCP server;
  - (b3ii) generating a plurality of IP addresses within the range;
  - (b3iii) selecting one of the plurality of IP addresses and determining whether it is in use;
- and
- (b3iv) assigning the one IP address to the client system if the one IP address is not in use.

11. (Original) The method of claim 8 wherein the utilizing step (b) includes:

- (b5) repeating step (b3) for a next solution if the implementation of a previous solution is unsuccessful.

12. (Currently amended) A computer readable medium containing program instructions for establishing a connection between a client system and a network, the program instructions for:

- (a) collecting real time connectivity information by the client system, wherein the collecting instruction (a) further includes:
  - (a1) monitoring and collecting network traffic in real time;
  - (a2) assigning a weight to the real time network traffic based on popularity; and
  - (a3) creating a weighted list from the weighted real time network traffic; and
- (b) utilizing the real time connectivity information by the client system to establish a connection with the network.

13. (Original) The computer readable medium of claim 12 further comprising:  
(c) utilizing data from a local persistent knowledgebase to establish a connection to the network.

14. (Original) The computer readable medium of claim 12 further comprising:  
(d) utilizing data from a server based database to establish a connection to the network.

15. (Canceled)

16. (Currently amended) The computer readable medium of claim ~~15~~ 12 further comprising the instruction for:

(c) storing the weighted list in the client system.

17. (Original) The computer readable medium of claim 16, wherein the local persistent knowledgebase is stored in the client system.

18. (Original) The computer readable medium of claim 12 further comprising:  
(c) utilizing a set of local rules to establish a connection to the network.

19. (Original) The computer readable medium of claim 12, wherein the utilizing instruction (b) includes:

- (b1) detecting a failed connection;
- (b2) determining a cause of the failed connection by the client system;
- (b3) generating a solution based on the cause and the real time connectivity

information; and

- (b4) implementing the solution.

20. (Original) The computer readable medium of claim 19, wherein the determining instruction (b2) includes:

- (b2i) analyzing at least one error message associated with the failed connection; and
- (b2ii) auditing a plurality of communication devices in the client to determine which of the plurality of communication devices is a potential candidate for connectivity.

21. (Original) The computer readable medium of claim 19, wherein the generating instruction (b3) includes:

- (b3i) analyzing the real time connectivity information to determine a range of IP addresses assigned by a DHCP server;
  - (b3ii) generating a plurality of IP addresses within the range;
  - (b3iii) selecting one of the plurality of IP addresses and determining whether it is in use;
- and
- (b3iv) assigning the one IP address to the client system if the one IP address is not in use.

22. (Original) The computer readable medium of claim 19 wherein the utilizing instruction (b) includes:

(b5) repeating step (b3) for a next solution if the implementation of a previous solution is unsuccessful.

23. (Currently amended) A computer system coupled to a network comprising:  
at least one network adapter for monitoring and collecting real time connectivity information from the network;

memory for storing the real time connectivity information, wherein the memory further:

monitors and collects network traffic in real time;

assigns a weight to the real time network traffic based on popularity; and

creates a weighted list from the weighted real time network traffic; and

a processor coupled to the memory and to the at least one network adapter, wherein the processor is configured to execute program instructions for utilizing the real time connectivity information to repair a failed network connection between the computer system and the network.

24. (Original) The computer system of claim 23, wherein the program instructions further comprises assigning a weight to the real time connectivity information based on popularity and creating a weighted list from the weighted real time connectivity information.

25. (Original) The computer system of claim 23, wherein the processor is configured to invoke an inference engine for determining a cause of a failed connection between the

computer system and the network and for generating a solution based on the cause utilizing the real time connectivity information.